

Welding, Fabrication, and Metal Forming

Manufacturing Technologies

The department consists of three trades: welding; fabrication and assembly; and precision metal forming. These interrelated groups use similar equipment and rely on each other's skills. One stop will get you the service of three reliable trades.

The team manufactures and assembles prototype hardware and has the in-house capability of producing hardware with sizes ranging from thumbnail to rail-car. Expertise includes aircraft quality sheet metal construction, certified welding, and assembly. The staff has experience managing a variety of activities: design modification assistance; in-house fabrication; and project management and can work with your engineers to transform sketches and ideas into working prototypes.

Capabilities

- Fabricate complex precision components such as rocket bodies, re-entry vehicles and satellite hardware
- Manufacture large support structures, platforms, racks, shipping containers or specialty washers
- Design and fabrication of special tools and fixtures, and certified welding
- CAD files and engineering drawings are acceptable forms of media; hand waving and napkin sketches are also adequate
- The tradesmen are capable of interpreting



your signals and manufacturing, erecting or dismantling your product

Resources

- CNC punching machines (Trumpf & Strippit) capable of piercing .090 inch stainless steel and 1/4 aluminum
- CNC Trumpf V130 bending break (200 ton capacity)
- Time saver, brush finish on material
- Large precision metal rolling equipment capable of rolling 72 inch long cylinders
- Small-scale precision metal rolling equipment capable of rolling cylinders as small as 4 inches diameter and 18 inches long
- Precision shears ranging from 8 feet to 2



feet

- Milling machines
- Compression riveting machines
- Lathes
- Gas tungsten arc welders
- Gas metal arc welders
- Shielded metal arc welders
- Plastic welding equipment
- Overhead cranes



Accomplishments

- Provide technical assistance in design and fabrication to New Mexico Small Business Assistance Program (www.sandia.gov/smallbusinessprograms)
- Strategic Target System (STARS): Developed by Sandia National Laboratories for the United States Army Space and Strategic Defense. Provide Manufacturing Assistance
- Advanced Atmospheric Research Equipment (AARE) project; provided critical manufacturing process and assembly design; Whole Air Collection System (WACS)
- Humble Birch I Penetrator test; providing real time support
- The ability for the shop to accept an electronic Pro/E file and use it to fabricate the parts

Contact

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